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Titles of most frequently occurring classifications of patents returned
from a search of 10776680 on Mar 30 , 2007

- 21 257/E25.023 (0 OR, 21 XR)
Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
257/E25.001 .ASSEMBLIES CONSISTING OF PLURALITY OF INDIVIDUAL SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
257/E25.002 ..All devices being of same type, e.g., assemblies of rectifier diodes (EPO)
257/E25.022 ...Devices having separate containers (EPO)
257/E25.023Device consisting of plurality of semiconductor or other solid-state devices or components formed in or on common substrate, e.g., integrated circuit device (EPO)
- 15 257/686 (3 OR, 12 XR)
Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
257/678 .HOUSING OR PACKAGE
257/685 ..Multiple housings
257/686 ...Stacked arrangement
- 11 361/704 (8 OR, 3 XR)
Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL COMPONENTS
361/679 ..For electronic systems and devices
361/688 ...With cooling means
361/704Thermal conduction
- 11 257/723 (0 OR, 11 XR)
Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
257/678 .HOUSING OR PACKAGE
257/723 ..For plural devices
- 10 257/713 (0 OR, 10 XR)
Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
257/678 .HOUSING OR PACKAGE
257/712 ..With provision for cooling the housing or its contents
257/713 ...For integrated circuit
- 10 257/E21.504 (0 OR, 10 XR)
Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
257/E21.001 .PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE OR TREATMENT OF SEMICONDUCTOR OR SOLID-STATE DEVICES OR OF PARTS THEREOF (EPO)
257/E21.002 ..Manufacture or treatment of semiconductor device (EPO)
257/E21.04 ...Device having at least one potential-jump barrier or surface barrier, e.g., PN junction, depletion layer, carrier concentration layer (EPO)
257/E21.499Assembling semiconductor devices, e.g., packaging, including mounting, encapsulating, or treatment of packaged semiconductor (EPO)
257/E21.502Encapsulation, e.g., encapsulation layer, coating (EPO)
257/E21.504Moulds (EPO)
- 9 257/E23.002 (0 OR, 9 XR)
Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)

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257/E23.002 ..Details not otherwise provided for, e.g., protection
against moisture (EPO)

9 257/E23.092 (0 OR, 9 XR)
Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
DIODES)
257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR
OTHER SOLID-STATE DEVICES (EPO)
257/E23.08 ..Arrangements for cooling, heating, ventilating or
temperature compensation; temperature-sensing arrangements (EPO)
257/E23.087 ...Fillings or auxiliary members in containers or
encapsulations selected or arranged to facilitate heating or cooling (EPO)
257/E23.09Auxiliary members in containers characterized by their
shape, e.g., pistons (EPO)
257/E23.092Auxiliary members in encapsulations (EPO)

9 257/E25.022 (0 OR, 9 XR)
Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
DIODES)
257/E25.001 .ASSEMBLIES CONSISTING OF PLURALITY OF INDIVIDUAL
SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
257/E25.002 ..All devices being of same type, e.g., assemblies of
rectifier diodes (EPO)
257/E25.022 ...Devices having separate containers (EPO)

8 361/707 (4 OR, 4 XR)
Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
COMPONENTS
361/679 ..For electronic systems and devices
361/688 ...With cooling means
361/704Thermal conduction
361/707Through support means

8 361/735 (4 OR, 4 XR)
Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
COMPONENTS
361/679 ..For electronic systems and devices
361/728 ...Module
361/729Plural
361/735Stacked

8 257/685 (1 OR, 7 XR)
Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
DIODES)
257/678 .HOUSING OR PACKAGE
257/685 ..Multiple housings

7 165/104.33 (1 OR, 6 XR)
Class 165 HEAT EXCHANGE
165/104.11 .INTERMEDIATE FLUENT HEAT EXCHANGE MATERIAL RECEIVING AND
DISCHARGING HEAT
165/104.19 ..Liquid fluent heat exchange material
165/104.33 ...Cooling electrical device

7 165/80.3 (0 OR, 7 XR)
Class 165 HEAT EXCHANGE
165/80.1 .WITH RETAINER FOR REMOVABLE ARTICLE
165/80.2 ..Electrical component
165/80.3 ...Air cooled, including fins

7 361/719 (3 OR, 4 XR)

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| | |
|--------------|--|
| Class 361 | ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES |
| 361/600 | .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL |
| COMPONENTS | |
| 361/679 | ..For electronic systems and devices |
| 361/688 | ...With cooling means |
| 361/704 |Thermal conduction |
| 361/717 |For active solid state devices |
| 361/718 |For integrated circuit |
| 361/719 |Circuit board mounted |
| 7 361/715 | (1 OR, 6 XR) |
| Class 361 | ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES |
| 361/600 | .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL |
| COMPONENTS | |
| 361/679 | ..For electronic systems and devices |
| 361/688 | ...With cooling means |
| 361/704 |Thermal conduction |
| 361/715 |For module |
| 6 361/687 | (3 OR, 3 XR) |
| Class 361 | ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES |
| 361/600 | .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL |
| COMPONENTS | |
| 361/679 | ..For electronic systems and devices |
| 361/683 | ...Computer related support |
| 361/687 |With cooling means |
| 6 257/724 | (0 OR, 6 XR) |
| Class 257 | ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE |
| DIODES) | |
| 257/678 | .HOUSING OR PACKAGE |
| 257/723 | ..For plural devices |
| 257/724 | ...With discrete components |
| 6 174/16.3 | (0 OR, 6 XR) |
| Class 174 | ELECTRICITY: CONDUCTORS AND INSULATORS |
| 174/8 | .WITH FLUIDS OR VACUUM |
| 174/15.1 | ..With cooling or fluid feeding, circulating or distributing |
| 174/16.1 | ...By ventilation or gas circulation |
| 174/16.3 |With heat sink |
| 6 257/719 | (0 OR, 6 XR) |
| Class 257 | ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE |
| DIODES) | |
| 257/678 | .HOUSING OR PACKAGE |
| 257/712 | ..With provision for cooling the housing or its contents |
| 257/718 | ...Heat dissipating element held in place by clamping or |
| spring means | |
| 257/719 |Pressed against semiconductor element |
| 6 361/686 | (3 OR, 3 XR) |
| Class 361 | ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES |
| 361/600 | .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL |
| COMPONENTS | |
| 361/679 | ..For electronic systems and devices |
| 361/683 | ...Computer related support |
| 361/686 |Input/output device support |
| 5 165/80.4 | (0 OR, 5 XR) |
| Class 165 | HEAT EXCHANGE |
| 165/80.1 | .WITH RETAINER FOR REMOVABLE ARTICLE |
| 165/80.2 | ..Electrical component |
| 165/80.4 | ...Liquid cooled |

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- 5 174/15.2 (0 OR, 5 XR)
 Class 174 ELECTRICITY: CONDUCTORS AND INSULATORS
 174/8 .WITH FLUIDS OR VACUUM
 174/15.1 ..With cooling or fluid feeding, circulating or distributing
 174/15.2 ...By heat pipe
- 5 361/761 (0 OR, 5 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
 COMPONENTS
 361/679 ..For electronic systems and devices
 361/748 ...Printed circuit board
 361/760Connection of components to board
 361/761Component within printed circuit board
- 5 361/699 (2 OR, 3 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
 COMPONENTS
 361/679 ..For electronic systems and devices
 361/688 ...With cooling means
 361/689Fluid
 361/699Liquid
- 5 361/764 (1 OR, 4 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
 COMPONENTS
 361/679 ..For electronic systems and devices
 361/748 ...Printed circuit board
 361/760Connection of components to board
 361/761Component within printed circuit board
 361/764Integrated circuit
- 5 257/E25.011 (0 OR, 5 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
 DIODES)
 257/E25.001 .ASSEMBLIES CONSISTING OF PLURALITY OF INDIVIDUAL
 SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
 257/E25.002 ..All devices being of same type, e.g., assemblies of
 rectifier diodes (EPO)
 257/E25.003 ...Devices not having separate containers (EPO)
 257/E25.01Device consisting of plurality of semiconductor or other
 solid state devices or components formed in or on common substrate, e.g., integrated
 circuit device (EPO)
 257/E25.011Devices being arranged next and on each other, i.e.,
 mixed assemblies (EPO)
- 5 174/252 (1 OR, 4 XR)
 Class 174 ELECTRICITY: CONDUCTORS AND INSULATORS
 174/68.1 .CONDUITS, CABLES OR CONDUCTORS
 174/250 ..Preformed panel circuit arrangement (e.g., printed
 circuit)
 174/252 ...With cooling means
- 5 62/55.5 (4 OR, 1 XR)
 Class 62 REFRIGERATION
 62/55.5 .LOW PRESSURE COLD TRAP PROCESS AND APPARATUS
- 5 257/712 (0 OR, 5 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
 DIODES)

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257/678 .HOUSING OR PACKAGE
 257/712 ..With provision for cooling the housing or its contents

4 257/E25.013 (0 OR, 4 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
 257/E25.001 .ASSEMBLIES CONSISTING OF PLURALITY OF INDIVIDUAL SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
 257/E25.002 ..All devices being of same type, e.g., assemblies of rectifier diodes (EPO)
 257/E25.003 ...Devices not having separate containers (EPO)
 257/E25.01Device consisting of plurality of semiconductor or other solid state devices or components formed in or on common substrate, e.g., integrated circuit device (EPO)
 257/E25.013Stacked arrangements of devices (EPO)

4 257/E23.101 (0 OR, 4 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
 257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
 257/E23.08 ..Arrangements for cooling, heating, ventilating or temperature compensation; temperature-sensing arrangements (EPO)
 257/E23.101 ...Selection of materials, or shaping, to facilitate cooling or heating, e.g., heat sinks (EPO)

4 361/803 (0 OR, 4 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL COMPONENTS
 361/679 ..For electronic systems and devices
 361/748 ...Printed circuit board
 361/784Plural
 361/803Interconnection details

4 361/790 (1 OR, 3 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL COMPONENTS
 361/679 ..For electronic systems and devices
 361/748 ...Printed circuit board
 361/784Plural
 361/785With separable connector or socket means
 361/790Stacked

4 361/702 (0 OR, 4 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL COMPONENTS
 361/679 ..For electronic systems and devices
 361/688 ...With cooling means
 361/689Fluid
 361/702With cold plate or heat sink

4 165/185 (0 OR, 4 XR)
 Class 165 HEAT EXCHANGE
 165/185 .HEAT TRANSMITTER

4 257/787 (1 OR, 3 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
 257/787 .ENCAPSULATED

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- 4 257/717 (1 OR, 3 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
 257/678 .HOUSING OR PACKAGE
 257/712 ..With provision for cooling the housing or its contents
 257/717 ...Isolation of cooling means (e.g., heat sink) by an electrically insulating element (e.g., spacer)
- 4 361/730 (0 OR, 4 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL COMPONENTS
 361/679 ..For electronic systems and devices
 361/728 ...Module
 361/729Plural
 361/730With housing
- 3 361/688 (1 OR, 2 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL COMPONENTS
 361/679 ..For electronic systems and devices
 361/688 ...With cooling means
- 3 438/109 (1 OR, 2 XR)
 Class 438 SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS
 438/106 .PACKAGING (E.G., WITH MOUNTING, ENCAPSULATING, ETC.) OR TREATMENT OF PACKAGED SEMICONDUCTOR
 438/107 ..Assembly of plural semiconductive substrates each possessing electrical device
 438/109 ...Stacked array (e.g., rectifier, etc.)
- 3 257/720 (0 OR, 3 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
 257/678 .HOUSING OR PACKAGE
 257/712 ..With provision for cooling the housing or its contents
 257/720 ...Heat dissipating element has high thermal conductivity insert (e.g., copper slug in aluminum heat sink)
- 3 257/E23.125 (0 OR, 3 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
 257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
 257/E23.116 ..Encapsulations, e.g., encapsulating layers, coatings, e.g., for protection (EPO)
 257/E23.123 ...Characterized by arrangement or shape (EPO)
 257/E23.124Device being completely enclosed (EPO)
 257/E23.125Substrate forming part of encapsulation (EPO)
- 3 257/E23.084 (0 OR, 3 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
 257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
 257/E23.08 ..Arrangements for cooling, heating, ventilating or temperature compensation; temperature-sensing arrangements (EPO)
 257/E23.083 ...Mountings or securing means for detachable cooling or heating arrangements; fixed by friction, plugs or springs (EPO)
 257/E23.084With bolts or screws (EPO)
- 3 257/E23.09 (0 OR, 3 XR)

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Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
 257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
 257/E23.08 ..Arrangements for cooling, heating, ventilating or temperature compensation; temperature-sensing arrangements (EPO)
 257/E23.087 ...Fillings or auxiliary members in containers or encapsulations selected or arranged to facilitate heating or cooling (EPO)
 257/E23.09Auxiliary members in containers characterized by their shape, e.g., pistons (EPO)

3 257/E23.104 (0 OR, 3 XR)

Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
 257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
 257/E23.08 ..Arrangements for cooling, heating, ventilating or temperature compensation; temperature-sensing arrangements (EPO)
 257/E23.101 ...Selection of materials, or shaping, to facilitate cooling or heating, e.g., heat sinks (EPO)
 257/E23.102Cooling facilitated by shape of device (EPO)
 257/E23.104Characterized by shape of housing (EPO)

3 361/744 (0 OR, 3 XR)

Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL COMPONENTS
 361/679 ..For electronic systems and devices
 361/728 ...Module
 361/736With printed circuit boards
 361/744Cordwood type

3 257/777 (0 OR, 3 XR)

Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
 257/734 .COMBINED WITH ELECTRICAL CONTACT OR LEAD
 257/777 ..Chip mounted on chip

3 257/727 (0 OR, 3 XR)

Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)
 257/678 .HOUSING OR PACKAGE
 257/727 ..Device held in place by clamping

3 365/51 (2 OR, 1 XR)

Class 365 STATIC INFORMATION STORAGE AND RETRIEVAL
 365/51 .FORMAT OR DISPOSITION OF ELEMENTS

3 361/720 (2 OR, 1 XR)

Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL COMPONENTS
 361/679 ..For electronic systems and devices
 361/688 ...With cooling means
 361/704Thermal conduction
 361/720For printed circuit board

3 361/749 (0 OR, 3 XR)

Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL COMPONENTS
 361/679 ..For electronic systems and devices
 361/748 ...Printed circuit board

361/749Flexible board

3 361/717 (0 OR, 3 XR)

Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
 COMPONENTS
 361/679 ..For electronic systems and devices
 361/688 ...With cooling means
 361/704Thermal conduction
 361/717For active solid state devices

3 361/709 (0 OR, 3 XR)

Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
 COMPONENTS
 361/679 ..For electronic systems and devices
 361/688 ...With cooling means
 361/704Thermal conduction
 361/707Through support means
 361/709Heat sink

3 257/706 (3 OR, 0 XR)

Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
 DIODES)
 257/678 .HOUSING OR PACKAGE
 257/701 ..Insulating material
 257/706 ...With heat sink

3 257/707 (0 OR, 3 XR)

Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
 DIODES)
 257/678 .HOUSING OR PACKAGE
 257/701 ..Insulating material
 257/706 ...With heat sink
 257/707Directly attached to semiconductor device

3 257/E23.039 (0 OR, 3 XR)

Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
 DIODES)
 257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR
 OTHER SOLID-STATE DEVICES (EPO)
 257/E23.01 ..Arrangements for conducting electric current to or from
 solid-state body in operation, e.g., leads, terminal arrangements (EPO)
 257/E23.023 ...Consisting of soldered or bonded constructions (EPO)
 257/E23.031Lead frames or other flat leads (EPO)
 257/E23.037Characterized by die pad (EPO)
 257/E23.039Chip-on-leads or leads-on-chip techniques, i.e., inner
 lead fingers being used as die pad (EPO)

3 361/683 (0 OR, 3 XR)

Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
 COMPONENTS
 361/679 ..For electronic systems and devices
 361/683 ...Computer related support

3 361/726 (0 OR, 3 XR)

Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
 COMPONENTS
 361/679 ..For electronic systems and devices
 361/724 ...Cabinet-type housing
 361/725With retractable or readily detachable chassis

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361/726with locking means or device

3 361/727 (0 OR, 3 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL

COMPONENTS
 361/679 ..For electronic systems and devices
 361/724 ...Cabinet-type housing
 361/725With retractable or readily detachable chassis
 361/727Sliding component or compartment

3 361/718 (0 OR, 3 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL

COMPONENTS
 361/679 ..For electronic systems and devices
 361/688 ...With cooling means
 361/704Thermal conduction
 361/717For active solid state devices
 361/718For integrated circuit

3 257/730 (0 OR, 3 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE

DIODES)
 257/678 .HOUSING OR PACKAGE
 257/730 ..Outside periphery of package having specified shape or

configuration

2 257/734 (0 OR, 2 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE

DIODES)
 257/734 .COMBINED WITH ELECTRICAL CONTACT OR LEAD

2 257/E21.525 (0 OR, 2 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE

DIODES)
 257/E21.001 .PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE OR
 TREATMENT OF SEMICONDUCTOR OR SOLID-STATE DEVICES OR OF PARTS THEREOF (EPO)
 257/E21.521 ..Testing or measuring during manufacture or treatment or
 reliability measurement, i.e., testing of parts followed by no processing which
 modifies parts as such (EPO)
 257/E21.525 ...Procedures, i.e., sequence of activities consisting of
 plurality of measurement and correction, marking or sorting steps (EPO)

2 257/E25.012 (0 OR, 2 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE

DIODES)
 257/E25.001 .ASSEMBLIES CONSISTING OF PLURALITY OF INDIVIDUAL
 SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
 257/E25.002 ..All devices being of same type, e.g., assemblies of
 rectifier diodes (EPO)
 257/E25.003 ...Devices not having separate containers (EPO)
 257/E25.01Device consisting of plurality of semiconductor or other
 solid state devices or components formed in or on common substrate, e.g., integrated
 circuit device (EPO)
 257/E25.012Devices being arranged next to each other (EPO)

2 29/832 (0 OR, 2 XR)
 Class 29 METAL WORKING
 29/592 .METHOD OF MECHANICAL MANUFACTURE
 29/592.1 ..Electrical device making
 29/825 ...Conductor or circuit manufacturing
 29/829On flat or curved insulated base, e.g., printed circuit,

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etc.

29/832Assembling to base an electrical component, e.g., capacitor, etc.

2 361/708 (0 OR, 2 XR)

Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL

COMPONENTS

361/679 ..For electronic systems and devices
361/688 ...With cooling means
361/704Thermal conduction
361/707Through support means
361/708Specific chemical compound or element

2 361/698 (1 OR, 1 XR)

Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL

COMPONENTS

361/679 ..For electronic systems and devices
361/688 ...With cooling means
361/689Fluid
361/690Air
361/698And liquid

2 361/690 (0 OR, 2 XR)

Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL

COMPONENTS

361/679 ..For electronic systems and devices
361/688 ...With cooling means
361/689Fluid
361/690Air

2 361/689 (1 OR, 1 XR)

Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL

COMPONENTS

361/679 ..For electronic systems and devices
361/688 ...With cooling means
361/689Fluid

2 165/165 (0 OR, 2 XR)

Class 165 HEAT EXCHANGE
165/164 .FLOW PASSAGES FOR TWO CONFINED FLUIDS
165/165 ..Interdigitated plural first and plural second fluid

passages

2 257/714 (0 OR, 2 XR)

Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE

DIODES)

257/678 .HOUSING OR PACKAGE
257/712 ..With provision for cooling the housing or its contents
257/714 ...Liquid coolant

2 257/E23.087 (0 OR, 2 XR)

Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE

DIODES)

257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR
OTHER SOLID-STATE DEVICES (EPO)

257/E23.08 ..Arrangements for cooling, heating, ventilating or
temperature compensation; temperature-sensing arrangements (EPO)

257/E23.087 ...Fillings or auxiliary members in containers or
encapsulations selected or arranged to facilitate heating or cooling (EPO)

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2 361/733 (0 OR, 2 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
 COMPONENTS
 361/679 ..For electronic systems and devices
 361/728 ...Module
 361/729Plural
 361/730With housing
 361/733Selective connections

2 257/722 (0 OR, 2 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
 DIODES)
 257/678 .HOUSING OR PACKAGE
 257/712 ..With provision for cooling the housing or its contents
 257/721 ...With gas coolant
 257/722With fins

2 257/E23.098 (0 OR, 2 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
 DIODES)
 257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR
 OTHER SOLID-STATE DEVICES (EPO)
 257/E23.08 ..Arrangements for cooling, heating, ventilating or
 temperature compensation; temperature-sensing arrangements (EPO)
 257/E23.097 ...Involving transfer of heat by flowing fluids (EPO)
 257/E23.098By flowing liquids (EPO)

2 365/63 (0 OR, 2 XR)
 Class 365 STATIC INFORMATION STORAGE AND RETRIEVAL
 365/63 .INTERCONNECTION ARRANGEMENTS

2 365/52 (1 OR, 1 XR)
 Class 365 STATIC INFORMATION STORAGE AND RETRIEVAL
 365/52 .HARDWARE FOR STORAGE ELEMENTS

2 365/226 (0 OR, 2 XR)
 Class 365 STATIC INFORMATION STORAGE AND RETRIEVAL
 365/226 .POWERING

2 174/15.1 (0 OR, 2 XR)
 Class 174 ELECTRICITY: CONDUCTORS AND INSULATORS
 174/8 .WITH FLUIDS OR VACUUM
 174/15.1 ..With cooling or fluid feeding, circulating or distributing

2 361/716 (0 OR, 2 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
 COMPONENTS
 361/679 ..For electronic systems and devices
 361/688 ...With cooling means
 361/704Thermal conduction
 361/715For module
 361/716Plural

2 361/700 (1 OR, 1 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
 COMPONENTS
 361/679 ..For electronic systems and devices
 361/688 ...With cooling means
 361/689Fluid

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- 361/699Liquid
 361/700Change of physical state
- 2 62/259.2 (1 OR, 1 XR)
 Class 62 REFRIGERATION
 62/259.1 .STRUCTURAL INSTALLATION
 62/259.2 ..With electrical component cooling
- 2 361/701 (1 OR, 1 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
 COMPONENTS
 361/679 ..For electronic systems and devices
 361/688 ...With cooling means
 361/689Fluid
 361/701With heat exchanger unit
- 2 136/246 (2 OR, 0 XR)
 Class 136 BATTERIES: THERMOELECTRIC AND PHOTOELECTRIC
 136/243 .PHOTOELECTRIC
 136/244 ..Panel or array
 136/246 ...With concentrator, orientator, reflector, or cooling
 means
- 2 250/203.4 (0 OR, 2 XR)
 Class 250 RADIANT ENERGY
 250/200 .PHOTOCELLS; CIRCUITS AND APPARATUS
 250/201.1 ..Photocell controls its own optical systems
 250/203.1 ...Following a target (e.g., a star or instrument pointer or
 other object) other than a pattern
 250/203.3Self-luminous target
 250/203.4Sun
- 2 353/3 (0 OR, 2 XR)
 Class 353 OPTICS: IMAGE PROJECTORS
 353/3 .HELIOSTATS
- 2 361/710 (0 OR, 2 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
 COMPONENTS
 361/679 ..For electronic systems and devices
 361/688 ...With cooling means
 361/704Thermal conduction
 361/707Through support means
 361/709Heat sink
 361/710Details
- 2 257/718 (0 OR, 2 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
 DIODES)
 257/678 .HOUSING OR PACKAGE
 257/712 ...With provision for cooling the housing or its contents
 257/718 ...Heat dissipating element held in place by clamping or
 spring means
- 2 439/161 (0 OR, 2 XR)
 Class 439 ELECTRICAL CONNECTORS
 439/161 .HEAT RESPONSIVE CONTACT PRESSURE CONTROL
- 2 417/901 (0 OR, 2 XR)
 Class 417 PUMPS
 417/901 .CRYOGENIC PUMPS

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- 2 236/101D (0 OR, 2 XR)
 Class 236 AUTOMATIC TEMPERATURE AND HUMIDITY REGULATION
 236/91**1 .THERMOSTATIC
 236/101R ..Expanding solid
 236/101D ...Coil thermostat
- 2 257/696 (2 OR, 0 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
 DIODES)
 257/678 .HOUSING OR PACKAGE
 257/690 ..With contact or lead
 257/692 ...With particular lead geometry
 257/693External connection to housing
 257/696Bent (e.g., J-shaped) lead
- 2 361/783 (0 OR, 2 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
 COMPONENTS
 361/679 ..For electronic systems and devices
 361/748 ...Printed circuit board
 361/760Connection of components to board
 361/783Having semiconductive device
- 2 257/E23.051 (0 OR, 2 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
 DIODES)
 257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR
 OTHER SOLID-STATE DEVICES (EPO)
 257/E23.01 ..Arrangements for conducting electric current to or from
 solid-state body in operation, e.g., leads, terminal arrangements (EPO)
 257/E23.023 ...Consisting of soldered or bonded constructions (EPO)
 257/E23.031Lead frames or other flat leads (EPO)
 257/E23.051Specifically adapted to facilitate heat dissipation
 (EPO)
- 2 257/E23.088 (0 OR, 2 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
 DIODES)
 257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR
 OTHER SOLID-STATE DEVICES (EPO)
 257/E23.08 ..Arrangements for cooling, heating, ventilating or
 temperature compensation; temperature-sensing arrangements (EPO)
 257/E23.087 ...Fillings or auxiliary members in containers or
 encapsulations selected or arranged to facilitate heating or cooling (EPO)
 257/E23.088Cooling by change of state, e.g., use of heat pipes
 (EPO)
- 2 257/E23.113 (0 OR, 2 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
 DIODES)
 257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR
 OTHER SOLID-STATE DEVICES (EPO)
 257/E23.08 ..Arrangements for cooling, heating, ventilating or
 temperature compensation; temperature-sensing arrangements (EPO)
 257/E23.101 ...Selection of materials, or shaping, to facilitate cooling
 or heating, e.g., heat sinks (EPO)
 257/E23.11Cooling facilitated by selection of materials for device
 (or materials for thermal expansion adaptation, e.g., carbon) (EPO)
 257/E23.113Ceramic materials or glass (EPO)
- 2 257/700 (0 OR, 2 XR)

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Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)

257/678 .HOUSING OR PACKAGE
 257/690 ..With contact or lead
 257/700 ...Multiple contact layers separated from each other by insulator means and forming part of a package or housing (e.g., plural ceramic layer package)

2 264/272.17 (0 OR, 2 XR)
 Class 264 PLASTIC AND NONMETALLIC ARTICLE SHAPING OR TREATING:

PROCESSES 264/239 .MECHANICAL SHAPING OR MOLDING TO FORM OR REFORM SHAPED ARTICLE

264/241 ..To produce composite, plural part or multilayered article
 264/259 ...Shaping material and uniting to a preform
 264/271.1Preform embedded in or surrounded by shaped material
 264/272.11Electrical component encapsulating
 264/272.17Semiconductor or barrier layer device (e.g., integrated circuit, transistor, etc.)

2 361/705 (1 OR, 1 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL COMPONENTS

361/679 ..For electronic systems and devices
 361/688 ...With cooling means
 361/704Thermal conduction
 361/705By specific coating

2 257/E23.038 (0 OR, 2 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)

257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
 257/E23.01 ..Arrangements for conducting electric current to or from solid-state body in operation, e.g., leads, terminal arrangements (EPO)
 257/E23.023 ...Consisting of soldered or bonded constructions (EPO)
 257/E23.031Lead frames or other flat leads (EPO)
 257/E23.037Characterized by die pad (EPO)
 257/E23.038Insulative substrate being used as die pad, e.g., ceramic, plastic (EPO)

2 257/E23.048 (0 OR, 2 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)

257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
 257/E23.01 ..Arrangements for conducting electric current to or from solid-state body in operation, e.g., leads, terminal arrangements (EPO)
 257/E23.023 ...Consisting of soldered or bonded constructions (EPO)
 257/E23.031Lead frames or other flat leads (EPO)
 257/E23.043Geometry of lead frame (EPO)
 257/E23.046Cross-section geometry (EPO)
 257/E23.047Characterized by bent parts (EPO)
 257/E23.048Bent parts being outer leads (EPO)

2 257/E23.054 (0 OR, 2 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE DIODES)

257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
 257/E23.01 ..Arrangements for conducting electric current to or from solid-state body in operation, e.g., leads, terminal arrangements (EPO)

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257/E23.023 ...Consisting of soldered or bonded constructions (EPO)
 257/E23.031Lead frames or other flat leads (EPO)
 257/E23.053Characterized by materials of lead frames or layers
 thereon (EPO)
 257/E23.054Metallic layers on lead frames (EPO)

2 257/E23.124 (0 OR, 2 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
 DIODES)
 257/E23.001 .PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR
 OTHER SOLID-STATE DEVICES (EPO)
 257/E23.116 ..Encapsulations, e.g., encapsulating layers, coatings,
 e.g., for protection (EPO)
 257/E23.123 ...Characterized by arrangement or shape (EPO)
 257/E23.124Device being completely enclosed (EPO)

2 174/138G (0 OR, 2 XR)
 Class 174 ELECTRICITY: CONDUCTORS AND INSULATORS
 174/137R .INSULATORS
 174/138R ..Special application
 174/138G ...Component mounting pads, spacers and holders

2 174/541 (0 OR, 2 XR)
 Class 174 ELECTRICITY: CONDUCTORS AND INSULATORS
 174/50 .BOXES AND HOUSINGS
 174/520 ..With electrical device
 174/535 ...Details of mount
 174/541Connection

2 174/562 (0 OR, 2 XR)
 Class 174 ELECTRICITY: CONDUCTORS AND INSULATORS
 174/50 .BOXES AND HOUSINGS
 174/520 ..With electrical device
 174/559 ...Multipart housing
 174/560Joining parts
 174/561Interlocking
 174/562Fastener

2 361/820 (0 OR, 2 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
 COMPONENTS
 361/679 ..For electronic systems and devices
 361/820 ...For semiconductor device

2 361/732 (0 OR, 2 XR)
 Class 361 ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
 361/600 .HOUSING OR MOUNTING ASSEMBLIES WITH DIVERSE ELECTRICAL
 COMPONENTS
 361/679 ..For electronic systems and devices
 361/728 ...Module
 361/729Plural
 361/730With housing
 361/732Having lock or interlock

2 257/676 (0 OR, 2 XR)
 Class 257 ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID-STATE
 DIODES)
 257/666 .LEAD FRAME
 257/676 ..With structure for mounting semiconductor chip to lead
 frame (e.g., configuration of die bonding flag, absence of a die bonding flag,
 recess for LED)